Conclusions: 1) Although in the thrombolytic era the incidence of BBB at presentation of acute MI may have decreased, this group of pts are at high risk for 30-day mortality; 2) Their poor prognosis does not seem to be related to a larger infarct size or more severe CHF. The role of septal asynergy, late bradyarrhythmias, and electrical instability (perhaps related to autonomic denervation of the conduction system) deserve further study; 3) Pts presenting with BBB during acute MI warrant especial surveillance and aggressive management, which should probably include prophylactic pacing.

908-109 Incremental Prognostic Value of Electrocardiographic Findings when Added to Baseline Clinical Variables in Patients with Acute Myocardial Infarction

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Risk assessment for patients with acute myocardial infarction is critical in facilitating appropriate therapeutic decision making and resource utilization. Prior investigation of the GUSTO I database has identified 16 baseline clinical variables that independently and accurately predict 30-day mortality. We investigated the ability of the presenting electrocardiogram (ECG) to increase the predictive capacity of the clinical data, with a particular focus on the significance of ST segment shifts. We examined a 32,812 patient subset of the 41,021 pt enrolled in GUSTO I. Exclusionary criteria included absence of baseline ECG, LBBB, unknown 30-day mortality, <0.1 mV maximum ST elevation, paced or ventricular rhythm. 30-day follow-up was greater than 99.5% complete. Candidate ECG variables included LVH, RVH, RBBB, left anterior and left posterior hemiblock (LAHB, LPHB), prior MI in a distinct anatomic location, maximum ST elevation in any one lead, sum of ST elevation in all leads, number of leads with ≥0.1 mV ST elevation (NUMLEAD), sum of the absolute ST deviation from baseline in all leads (SUMDEV). Multivariable logistic regression modelling of the ECG data alone showed SUMDEV, Prior MI, NUMLEAD, RBBB and LAHB to provide independent prognostic information. Stepwise addition of the ECG variables to the clinical data indicated independent prognostic information in SUMDEV and RBBB (χ^2 = 184). The predictive value of this information was of similar magnitude to heart rate and MI location and was an order of magnitude larger than that for time to treatment, diabetes mellitus or smoking.

Multivariable Stepwise ECG Model

ECG Variable	Adjusted χ^{2*}
SUMDEV	229
Prior MI	89
NUMLEAD	54
RBBB	50
LAHB	16

* - $p < 0.001$ for each

Conclusions: Electrocardiographic variables add important information to baseline clinical and demographic data capable of improving early risk stratification of thrombolytic treated patients with acute myocardial infarction. Appropriate use of this information should improve clinical decision making and resource utilization.

908-110 Effect of Left Ventricular Hypertrophy on Infarct Expansion

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Infarct expansion after acute anterior infarct has been described in both animals and humans. Specific factors governing its development are not well defined. No previous prospective studies have serially examined the effect of underlying hypertrophy on infarct expansion in humans. Accordingly 2-D echocardiograms from 47 patients (pts) after a first transmural anterior M.I. were prospectively studied. A previously described expansion index (E.I.) (E.I. = Endocardial length of infarct containing segment/Endocardial length of noninfarcted segment) and the ratio of infarct thickness to noninfarcted thickness (I/N) along with LV end diastolic volume index (LVEDVI), LV end systolic volume index (LVESVI), LV ejection fraction (LVEF), basal interventricular septum (IVS) and posterior wall (PW) thickness were measured within 3 days from admission at 1 week and at 3 months.

Pts were divided according to their baseline LV thickness into group I and group II (IVS + PW = 24 ± 1 mm and 20 ± 2 mm (m ± SD) respectively). 20 pts formed group I and 27 group II. Medications in group I and groups II did not differ in regard to beta blockers, Ace inhibitors, nitrates and thrombolysis.

Results:

	Day 1–3 G.I/G.II	Day 7 G.I/G.II	3 Months G.I/G.II
E.I.	1 ± 0.04/1.1 ± 0.02	1 ± 0.05/1.3 ± 0.02*#	1.1 ± 0.04/1.4 ± 0.04*#
I/N	1.1 ± 0.03/1.1 ± 0.04	1.1 ± 0.04/1.1 ± 0.04	1.1 ± 0.04/0.9 ± 0.03*#
LVEDVI (cc)	49 ± 10/53 ± 12	51 ± 13/59 ± 11*	52 ± 12/65 ± 11*#
LVEF (%)	47 ± 4/45 ± 7	47 ± 5/44 ± 7	48 ± 6/45 ± 6

*$p < 0.05$ vs g I, #$p < 0.05$ vs day 1–3

Conclusions: Over the time course of 3 months, the expansion index and LVEDVI increased while I/N ratio decreased in group II and not group I; thus in this patient population, baseline left ventricular hypertrophy is an important factor governing infarct expansion.

908-111 Prognostic Value of Troponin T and CRP Levels in pts with Unstable Angina

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Troponin T (TT), a specific marker of myocardial cell damage, and C reactive protein (CRP), an acute phase reactant, were found to be prognostic of outcome in unstable angina (UA) in different studies. We assessed the sensitivity and specificity of these markers for myocardial infarction (MI), death (D) and for the need of revascularization within a week after admission (R) in a group of 90 pts with UA. Blood samples for TT and CRP measurement were taken on admission.

Results: 18/90 pts (20%) had elevated TT levels on admission (mean 0.8, range 0.2–4.3 μg/l, normal values <0.2 μg/l); 7 (39%) of these pts had MI or D and 3 (17%) had R. 72/90 pts (80%) had normal TT values; 8 (11%) of these pts had MI or D ($p = 0.013$) and 12 (17%) had R. Sensitivity of elevated TT values for MI or D was 67% and specificity 85%.

CRP was measured in 83 pts and was elevated (normal values < 3 mg/dl) in 50 (62%). 10 (20%) of these pts had MI or D and 11 (22%) had R. Only 2/33 pts (6%) with normal CRP levels had MI or D and 3/33 (9%) had R. Sensitivity of CRP > 3 mg/dl for MI or D was 83% and specificity 44%. 20/83 pts (24%) had CRP values > 10 mg/dl; 8 (40%) of these pts had MI or D ($p < 0.0007$ versus pts with CRP < 10 mg/dl) and 8 pts (40%) required R ($p = 0.004$ versus pts with CRP < 10 mg/dl). Sensitivity of CRP > 10 mg/dl for MI or D was 67% and for R was 57%; specificity for MI or D and also for R was 83%.

The combination of elevated values of TT and CRP was shown in 14/83 pts (17%); 6 (43%) of these pts had MI or D, while only 1/31 pts (3%) with normal TT and CRP had MI or D ($p = 0.003$). Sensitivity of elevated TT and CRP levels for MI or R was 43% and specificity 79%. Positive predictive value was 43% and negative predictive value 97%.

These results indicate that TT and CRP values on the admission are important prognostic predictors of outcome in pts with UA, particularly when both are elevated.

908-112 The Angiographic Fate of Infarct Related Arteries with TIMI 2 Flow Following Thrombolysis for Acute Myocardial Infarction

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In the GUSTO Angiographic Trial 1,175 patients underwent angiography at a mean of 97 ± 12 min following thrombolysis with either t-PA, Streptokinase, or a combination of both agents. For all treatment groups combined, 313 (27%) patients had TIMI 2 flow (T2). Of the patients with early TIMI 2 flow 151 (48%) continued to have TIMI 2 flow af follow-up (f/u) angiography a mean of 5.9 ± 1.9 days later, while in 162 (52%) the flow had improved to TIMI 3. The plot on the left shows the minimum luminal diameter (MLD) for patients with TIMI 2 flow at 90 minutes and 5–7 day f/u vs those with TIMI